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The use of process maturity model to assess operational risk management system at institutions of culture

Abstract: The aim of this paper is to present the main areas of application of the process maturity model to assess the maturity of risk management used in the management control system in the institutions of culture. The paper uses modern risk management theories and process maturity models.

Key-words: Risk management, process maturity models.

Introduction

Risk – standing for an accumulated probability effect of uncertain events that may either positively or negatively affect the achievement of goals – is an indispensable component of each activity of any organization. This is a non-deterministic situation where probabilities of cases, both positive and negative, are defined.

Effective operation of any organization in a constantly changing environment requires from managers risk taking that weakens the certainty of their decision. Although, as some theoreticians of the modern management notice – the largest threat (risk) for the organization is a refusal to take a risk.

One of the ways to increase the decision-making certainty level is therefore the introduction of *Risk Management* – RM, and the operational risk in particular. The importance of this process and the dynamics of changes, both in theoretical and practical ways of its implementation enforce integrating RM into a strategy of an institution and engaging not only the management board members and risk gestors but also simply all organizational units and employees.

The risk management processes optimization at institutions does not originate exclusively from legal requirements. A growing interest is also noticeable in the improvement of risk management processes due to the achievement of better operational results, e.g. providing a larger number of services or of bet-

ter quality when engaging certain resources. Those trends result in an increasingly growing interest in the so-called process maturity assessment models (*Business Process Maturity Models – BPMM*) that are a set of recommendations and good practices in terms of gaining operational effectiveness of the processes being implemented. Application thereof is to ensure the achievement of a defined status of the process maturity, thus constituting the capacity of an organization and of the processes it implements for systematic delivery of better operational results being improved on the ongoing basis.

The goal of this paper is an attempt to present the main areas of application of the process maturity model to assess the maturity of risk management executed under the management control system in the institutions of culture.

The paper uses modern risk management theories and process maturity models. The hereto conducted considerations have been illustrated with observations and experiences of authors related to the implementation of management control procedures in the museum where risk management standards are a legal requirement and risk management is of a special and formal character.

1. Operational Risk Management System at Institutions of Culture

The obligation to implement management control systems, as introduced by 29 August 2009 Act on Public Finance [Ustawa o finansach 2009], meant that cultural institutions were obliged to implement a formalized risk management. The-then practice in this area was limited to ad-hoc risk assessment, carried out by staff responsible for individual activities, and to taking appropriate actions. Some of the activities, associated with risk assessment and the development of security measures, have been forced by insurance companies that were conditioning a conclusion of their insurance policy agreements by implementation of measures and procedures to secure resources of museums.

Research studies, conducted in one of the museums in Lodz in 2010, showed that despite the use of quality and process management standards, the risk management was not formalized and the implementation of individual activities was scattered.

In the opinion of the museum managerial staff, a similar situation occurred in the majority of such centers. Therefore, it should be noted that the risk in the binding system was defined at different levels and in different parts of the organization reviewed (in most cases, the choice was made on the basis of not formalized decisions of managers and employees). This resulted in putting pressure on assessment and response to risk in – often unrelated to each other – risk groups, thus simultaneously resulting in the separation of the risk level monitoring and reporting functions. The risk management model applied was not also reflected in planning, both at its operational and strategic level.

With the implementation of the management control, a systemic approach to risk management has become necessary. In addition to the active involvement of the implementation team, this approach required the head management support. In order to ensure effective risk management, it is necessary to

include the implementation team in works on the organization strategy, financial planning, and operational decision-making. In addition, it is advisable to use risk management support tools also in the area of other, previously implemented management systems, such as: quality management and management processes of organization. Such placement of risk management in consequence leads to ensuring operational safety and continuity of activities performed by the organization.

In the new legal conditions – as described in the Public Finance Act quoted before – the start-up of the risk management process is initiated by the top level management staff. A decision to introduce risk management must be formalized and written into the mission and strategy of the organization. The next step is the appointment of the team to develop risk management policy, whereby it is advisable that the team should include representatives of the highest authorities of individual departments of cultural institutions. The team's task is to pre-analyze and assess risk as well as to develop risk management policy, and then implement risk management throughout the entire organization. In this context, the risk management policy is the basis for operational risk management.

The ongoing risk management process, proposed and adopted in the institution of culture being reviewed, consists of the following functions [Podręcznik 2010]:

- planning (high level) – determination of policies, methods, techniques, and risk management standards;
- identification – perception of threats and opportunities;
- qualitative analysis – determination of the risk scope;
- quantitative analysis – determination of risk size;
- planning of preventive actions – determining how to respond to particular risks;
- risk monitoring and control;
- interfunctional communication.

The changes made effect in the ongoing performance of risk management functions, and the operational results of the individual functions – using the interfunctional communication – are automatically passed as input parameters to the subsequent functions. It is particularly important in this area to make all the employees aware of the significance of risk management and make them actively involved in the process.

In the new legal environment, the handling of the risk management process has been given to senior management staff. This ensures that the objectives are achieved, assets are protected, and resources are efficiently, economically and effectively used.

The hereto presented considerations allow to agree with the observation that one of the most important risk management areas is the area of operational risk management [see Banks 2002; Kaczmarek 2005]. Frequently occurring damages or theft of exhibits are among the most commonly reported operating losses, resulting from negligence and poor risk management in cultural institutions, such as museums. It can therefore be concluded that opera-

tional risk is governed by similar rules in a financial institution, a trading company, public administration, or at institutions of culture.

Despite the specific character of activities performed by cultural institution, the operational risk management can be defined in them similarly as in the financial sector as the risk of a loss resulting from inadequate or faulty internal processes, people, systems, or external events [Maderak 2009, p. 24]. This risk is materialized in four areas of organizational activities, which requires each of them to introduce solutions to ensure an adequate level of safety. These areas are as follows [Staniec, Zawila-Niedzwiedzki 2005, p. 25]:

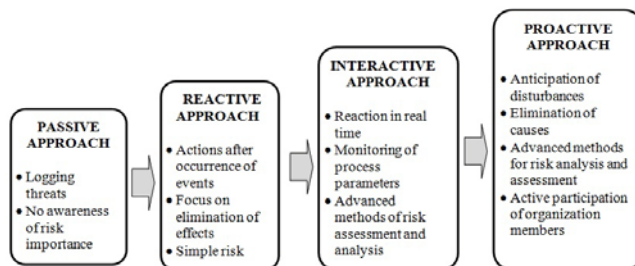
- physical protection,
- personal security,
- Security of data and IT systems,
- operational continuity.

The management control standards, required in all public sector organizations, indicate the need for risk management, however, they do not specify any solutions in this field. Each public budgetary sector unit can therefore individually define its operational risk and implement its own solutions in this regard. Such freedom allows for customizing operational risk management actions to the special character of the unit activities and the nature of threats as well as for building its own risk management system. This is extremely important because of the specific character and diversity of management models.

In compliance with the best practices in risk management at cultural institutions, this process should be implemented on the basis of formalized policies and procedures to identify, measure, monitor and control risks. Managerial staff are responsible to implement the adequate (adapted to the size and profile of the risks involved) organizational structure, provide a breakdown of activities to ensure the independence of the functions to measure, monitor, and control operational risk associated with risk taking. Furthermore, the risk management-related procedures should be known to employees and they should be subject to regular reviews in order to adapt them to changes in the risk profile and in the organizational environment.

Adapting the organizational structure to the developed risk management strategy is an extremely vital part of the risk management process in all organizations, including the institutions of culture. Figure 1 illustrates the phases that institutions were going through when developing and improving their risk management system. Due to the relatively low maturity of the operational risk management in public institutions (mostly related to the liability of the State Treasury, and not the managerial staff), it should be noted that many of the cultural institutions are at lower stages of the risk management system development.

Figure 1. Stages of operational risk management system development in cultural institutions



Source: adapted from: [Domańska-Szaruga, Wereda 2013, p. 27].

Passive approach stands for logging operational events and for using basic protections against the effects of possible hazards. Blindness, non-recognition, and even disregard for operational risk had prevailed in some organizations before the management control standards were introduced. Operational risk management was a responsibility of a chief accountant, IT specialist, or exhibitions supervising staff in museums.

In the reactive approach, organizations were taking actions only after the occurrence of events, which usually was associated with large losses. Those activities focused on the elimination of the effects of the materialized operational risk. Simple risk measurement methods are applicable here.

Interactive approach forces management in real-time, monitoring of key parameters of organizational processes, Key Performance Indicators of processes are introduced, as well as Key Risk Indicators, and Key Control Indicators. Advanced methods of risk assessment and analysis are applicable and it is recommended to appoint the manager in charge of operational risk and other components of the organizational structure for risk management purposes.

The highest degree of development, referred to as a proactive approach, is characterized by the use of internal and external data folders available and the history of key performance indicators of processes, risks, and controls. This enables anticipation of disturbances and elimination of the causes of operational risks occurrence. The risk analysis is performed using heuristic methods, scenario-based methods, risk factors analysis methods, etc. It is also recommended that benchmarking of the operational risk management systems should be used and that all members of the organization are actively involved in the management process [[Domańska-Szaruga, Wereda 2013, p. 27; K. Maderak 2009, s. 26].

The identified types of behaviors of cultural institutions allow for considering them as components of the operational risk management evolution

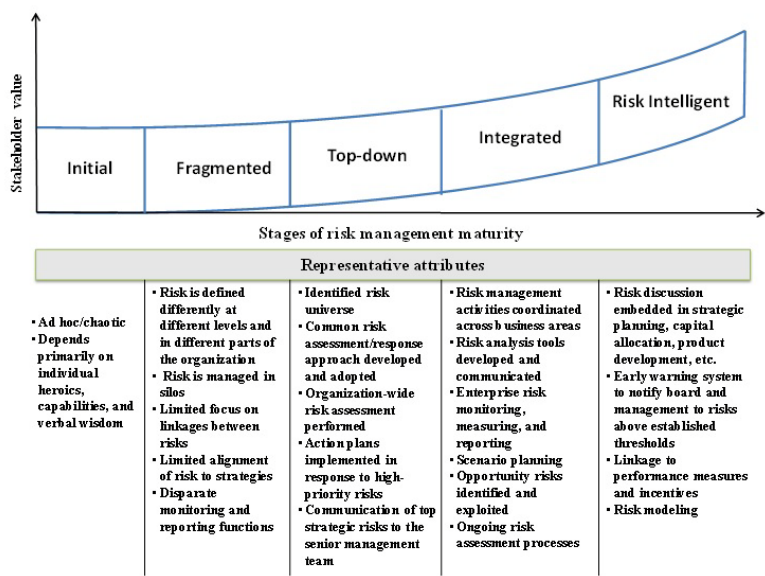
model. The evolution that is one of the most important tasks facing those who are in charge of management control systems in all units obliged to use it.

2. Assessment of the risk management maturity level at cultural institutions

As it is well known, along with their growing maturity organizations increasingly better and more coherently define and implement management processes. As a result, with increasing maturity they institutionalize their processes, mostly through policies, standards, and organizational structures.

The scale, included in the maturity model CMMI (Capability Maturity Model Integration), is helpful to assess the staging of such operations and procedures. This model was developed by the U.S. institution – Software Engineering Institute as a continuation of works, conducted in the 90’s, on the CMI (Capability Model Integration) theory – mostly related to processes of software development. Extending the scope of its application to processes across the entire organization has led to the development of the process maturity model. According to this model, the process maturity level at an organization may be assessed according to the criteria that determine subsequent levels of maturity. Due to its versatility, the CMMI model is used both as a tool to assess the overall maturity, and also maturity in certain areas of management. Therefore, one may assume that the model is also applicable to assess the risk management maturity in all types of organizations, also including the institutions of culture (Figure 2).

Figure 2. Risk Management Maturity Model



Source: [Risk Intelligent 2010, p. 5].

Identification of approaches to operational risk management in individual organizations and the reference of results to the illustrated Figure allows for determining their place on the way between ad hoc activities and a complete underestimation of the risk to include risk into the planning processes and the modeling of its value. Risk management models at institutions of culture can therefore be assessed and properly classified, but their primary purpose in this context is to achieve the highest degree of maturity. Organizations managing their risks in a mature way (Risk Intelligent Enterprise) have the following characteristic features [Zarządzanie ryzykiem 2011, p. 10]:

- act with longterm perspective and comprehensively: they effectively assess and manage risk in all departments, companies, and locations,
- build bridges: they are aware of the need for risk specialization – the need for an in-depth knowledge of various areas of risk and their mutual interactions,
- speak a common language: they have developed a uniform risk-related terminology (to have a good mutual understanding) and have implemented fixed measurement units (to assess risk in a measurable way),
- assess consequences: they are aware that, given the almost limitless number of risks, an attempt to foresee all the possible consequences is impossible; those companies focus on the consequences that may be associated with various areas of risk,
- estimate a vulnerability to threats / a degree of sensitivity: they attach greater importance to the probability level than they do at standard risk management by assigning great importance to the vulnerability to threats (due to the fact that the risk to the function extremes is usually the most dangerous),
- take mutual interaction of risk areas into account: they consider not only single events that generate a given type of risk, but they also consider various scenarios and mutual interaction of a number of risks,
- properly distribute their forces: they carry out an extensive risk assessment and then they make prioritization and focus their efforts on areas of the largest threats,
- shape the risk consciousness: they reckon that risk management is the duty and the responsibility of the entire company, part of its daily activities, and that it also belongs to the scope of the employee routine duties,
- bear the risk in exchange for gratification: they seek not only to reduce the risk, but they also perceive risk-taking as the way to create added value.

The features as indicated above stand for a canon that allows for assessing the RM systems maturity at the institutions of culture. Organizations, which have developed their risk awareness proactively and which preemptively respond to the occurrence of financial risk and examine its individual components when making any decision, are referred to as organizations with a mature risk management process. At institutions that manage risk in such a way, there is a noticeable reduction of volatility in economic performance and of the occurrence of unforeseen events for which preventive procedures have not

been developed. In addition, such organizations are characterized by a high level of maturity, they have consistent processes across all their locations, and centralized controlling functions (responsible for the risk-taking control and performed by the risk organization).

The assessment of the maturity level of operational risk management at institutions of culture therefore involves: the identification of opportunities to increase its effectiveness as well as the level of interest expressed by the senior management staff. It cannot be viewed as a technical activity in support of management, but it should be properly placed in the organization internal management process and be reflected in the developed long-term strategy. The basis in the risk management evolution process is in fact an appropriate level of assimilation and cultural complexity of risk "from general to specific", supported by the risk integrated framework. This provides both an independent, holistic, and a detailed look at the issues of risk for each level of any financial unit [electronic file <http://www.sas.com> 12.09.2013].

The assessment, carried out in line with the CMMI assumptions, allows you to determine how important management component the operational risk management process is at the institutions of culture. It is of particular importance because of the uniqueness of resources and the lack of capacity to regenerate them, etc. Risk avoidance would mean a discontinuation of the main goals implementation and also the violation of provisions that ensure implementation and efficiency of the management control system in those organizations.

Conclusion

The use of the process maturity model to assess the operational risk management systems at institutions of culture allows to identify both the status of those systems in individual organizations, as well as to identify those areas that require a response from the managerial staff. At the same time, it can be stated with a high degree of certainty (although without evidence of a scientific nature) that at present only a few institutions of culture manage their risks in a mature way.

The risk management process is usually performed by a small group of employees whose task is to: monitor the strategic objectives established for the purpose of risk management, monitor physical security, prepare drafts of internal regulations related to risk management, collect and process data in the field of risks, measurement, risk reporting and development. The same people are often involved in the teams working on various tasks and at the same time addressing many risks, while combining the designing, monitoring and controlling functions.

Using the risk management maturity model in practice, one should pay attention to the fact that even those organizations that have achieved a high level of the process maturity often remain at a low level in terms of their risk management maturity. The proposed risk management model can therefore be used to improve management in this area at public institutions of culture and ensure effectiveness of the properly oriented evolution.

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